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The Academic Library in Society's Knowledge System: A Case Study of Tshwane University of Technology

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Abstract

Academic libraries traditionally support the learning, teaching and research activities of universities. However, academic libraries do not operate in vacuum because they are part of the broader society. The purpose of this article is to fill the research gap that exists by focusing on Tshwane University of Technology's (TUT) libraries' challenges as a case study, considering developments in higher education in South Africa and elsewhere in the world.

The article employs a blended method approach that draws on a survey, a focus, interviews, group literature and empirical evidence to build a case study of TUT's libraries located within a wider knowledge system context. A purposive sample of 40 participants is drawn for this article. The sample consisted of members of TUT Executive Management Committee, the Library and Information Services Directorate, Heads of Libraries, librarians and representatives of student organisations. Data from participants at TUT is collected in a survey using an electronic questionnaire. The survey is followed by a focus group and interviews. The author uses an

electronic survey questionnaire because TUT campuses are spread across four provinces. The electronic survey questionnaire relies on email addresses and it's able to reach all participants regardless of location. Focus group and interviews are chosen to follow up on the electronic survey questionnaire. The article found that TUT's libraries passive response to the 2015 and 2016 student disruptions stems from a poor understanding of the theoretical context of their support roles and functions.

Key words

Academic libraries, knowledge systems, epistemology, knowledge society, #feesmustfall, #Rhodesmustfall

Introduction

The years 2015 and 2016 were a period of social upheaval and conflict led by various social movements in South Africa. A notable development was the emergence of the hashtag student social movements at universities across the country. The student social movements that emerged and took social media by storm were the #Feesmustfall and #Rhodesmustfall. These movements disrupted the higher education sector in 2015 and 2016. Since then, there have been debates and discussions on transformation in higher education in the country. At the center of these debates and discussions were 'decolonization' and africanization' of the university curriculum. The Minister of Higher Education, Dr Blade Nzimande, called for the 'africanization of the university' (Nzimande, 2015). There is a general agreement among role players in higher education that a discourse on 'africanization' and 'decolonization' is long overdue (Le Grange, 2016).

Closer inspection of exchanges by student leaders that arose indicates that they are highly politicized, and not properly thought through. For instance, Poho's (2016) call for free decolonized education reduces social conflict to issues of racism and capitalism while excluding alternative perspectives. Since social conflict is complex, "...it seems advisable, first, to sort out and to classify the problems which are conceived under the general heading of 'social conflict'..." (Dahrendorf, 1958: 171).

The purpose of this article is to fill the research gap that exists by focusing on Tshwane University of Technology's (TUT) libraries' challenges as a case study, in light of developments in higher education in South Africa and elsewhere in the world. The main argument of this article is that academic libraries traditionally support university faculties and departments in research, teaching and learning through the materials organized and stored as recorded knowledge. Importantly, they also have a historical connection with research libraries and a link with the wider functions relevant in a knowledge system. This problematizes their position and responsibility, as well as their response to social conflict.

With a view to explaining Tshwane University of Technology (TUT) libraries' response to the student disruptions, this article uses the idea of society's knowledge system as a theoretical framework. The author draws on a focused literature review and documentary evidence, and data was collected from a purposive sample using an electronic survey questionnaire, focus groups and interviews. The main value of the article is to call attention to the idea of a knowledge system and to enable TUT's libraries to respond adequately to social conflict. The article is original because

library and information science researchers in South Africa have not yet sufficiently investigated academic libraries using the knowledge system context.

Mapping South African universities and their libraries

The development of TUT's libraries since the merger of former Technikon Northern Gauteng, Technikon North West, and Technikon Pretoria should be viewed against the background of selected South African universities and their libraries. These include the University of South Africa (UNISA), the University of the Witwatersrand (Wits), Cape Peninsula University of Technology (CPUT), and Durban University of Technology (DUT). CPUT and DUT's libraries are especially relevant because their library systems are similar to that of TUT.

There are few sources on library history in South Africa (Dick, 2006, Suttie 2005; 2006). Moreover, the search for historical sources on South African universities and their libraries yielded more annual reports than journal articles and books. No annual reports of TUT's libraries could be found. The few sources found on academic library history include a study by Musiker (1982) on aspects of Wits library history, a doctoral thesis on the history of the University of Natal libraries between 1910 and 2003 by Buchanan (2008), and a study of the historical development of the library of the University of Cape Town between 1892 and 1955 by Immelmann (1955). Also found was an unpublished dissertation on the some libraries and book collections at the Cape of Good Hope, with special reference to the establishment of the South African library by Tyrell-Glynn (1972), Dubow's (2006) book on South Africa's intellectual history and Coates's (2014) doctoral thesis on the South African Library as a state-aided national library in the era of apartheid. These publications are not on academic libraries but are helpful in highlighting the wider context for

understanding the roles of libraries in society. Two publications by Suttie (2005; 2006) were very helpful in uncovering relevant facts about the UNISA library in Pretoria and its various branches. UNISA and its various libraries are relevant to TUT because they are spread across several provinces in South Africa.

The development of TUT's libraries

The university was established on 1 January 2004, with the merging of the former Technikon Northern Gauteng, Technikon North West, and Technikon Pretoria. The university has campuses in four of the nine provinces namely Gauteng, Mpumalanga, Limpopo, and the North West province. Each campus has a library referred to as a 'departmental library'. These departmental libraries serve the needs of academic departments and offer courses under the umbrella of the Department of Library and Information Services, which is centralized in Pretoria (TUT website, 2004-2018).

TUT's libraries can be traced back to the construction of the main library of the former Technikon Pretoria at the Pretoria campus. Although very little information could be found on the history of the former Pretoria Technikon library, its planning started in 1988. Importantly, the Pretoria Technikon library opened its door to users for the first time on the 1 October 1993. Private organizations have been involved in funding the establishment of university libraries throughout South Africa's history. This was also the case with the financial contribution made by Goldfields to the former Pretoria Technikon library (TUT website, 2004-2018), and the First National Bank's contribution to the establishment of Electronic Resource Centres in TUT's libraries. Partnerships

between TUT's libraries and private organizations strengthen the argument that libraries are located within wider social and economic contexts.

After the merger of the former Technikon Northern Gauteng, Technikon North West, and Technikon Pretoria in 2004, TUT's libraries inherited the library building of Technikon Pretoria's library in Pretoria, and its collections. These collections have since been distributed to other 'departmental libraries' at TUT's satellite campuses. Collections of the former Technikon Pretoria library can therefore be found in TUT satellite campus libraries. By 2015, TUT had a total of six campuses.

In 2018, TUT's satellite campuses consisted of twelve learning sites across six provinces, namely Gauteng, Mpumalanga, Limpopo, Kwazulu-Natal, Western Cape and North West province. Each learning site has a 'departmental library' that supports the teaching, learning and research activities of various faculties and departments. Since the establishment of these learning sites and their libraries, the greatest challenge has been the distribution of infrastructure such as buildings and resources. For instance, between 2004 and 2015, there were numerous complaints by the student representative council (SRC) and political formations on satellite campuses such as Soshanguwe, Polokwane, Mbombela and Emalahleni about the unequal distribution of infrastructure and resources. These complaints have since been investigated by the management of the university.

Some of the learning sites have been allocated a 'departmental library' with electronic resource centres and I-centres. Approximately 300 computers were replaced in 2014, followed by a further 179 in 2015 located in electronic resource centres and I-centres (Council on Higher Education,

2017: 25-27). These developments would not have been possible without the involvement of other stakeholders (e.g. First National Bank) in society. These stakeholders disclose “the plurality and diversity of academic libraries and often explains their contradictoriness, serving different constituencies and interests, accommodating competing and conflicting ideologies, apparently serving different masters” (Suttie, 2006: 284).

Student disruption crisis at TUT

Student disruptions started in 2008 at the Soshanguve and Ga Rankuwa campuses when students protested against fee hikes and academic exclusion. A time-line of student disruptions at TUT indicates that there were protests in 2009, 2010, 2011, 2012, 2014 and 2015. At the core of these disruptions were the infrastructure and service disparities between the historically-black TUT campuses and the historically white Pretoria campus. In addition, the university has struggled with governance and management. For instance, in 2011 the appointment of Johnny Molefe to the Vice-Chancellor position was marred by allegations of fabricated qualifications amid support from the management of the university. Then Minister of Higher Education, Blade Nzimande, appointed an independent assessor to look into the matter. The assessment identified serious problems in the governance and management of TUT stemming from the human resource portfolio of the institution (South African History Online, 2018). The ‘fees must fall’ and ‘Rhodes must fall movements’ of 2015 and 2016 was in many ways a continuation of student disruptions that started in 2008.

Although TUT’s libraries were not destroyed, general damage to other university property, death and injury have been at the centre of student protests at TUT. The targeting of TUT’s libraries during student protests included the disruption of learning and service provision. The burning of

the University of Kwazulu-Natal (UKZN) Howard College Law Library and other types of libraries in South Africa (see Lor, 2013; Dick, 2013; and Ntsala and Mahlatji, 2016) call attention to the need to locate TUT's libraries in a wider context.

Transformation initiatives at TUT

Transformation has not been a sustained focus for TUT since 2004. A discussion document on transformation was compiled in 2007 to interrogate TUT's responsiveness to the market, economic, and social needs of South Africa through its production, dissemination and application of knowledge (Pieterse, 2007). However, this document excluded TUT's libraries, and it was not clear what the role of TUT's libraries would be in dealing with student disruptions.

Transformation at TUT had completely stalled until the student disruptions of 2015 and 2016. In 2017, the transformation agenda was revisited more seriously. Before the TUT Transformation Summit took place on the 12th and 13th September 2017 at the Pretoria Campus, a thirty-page draft transformation framework was compiled and distributed to staff for comments. The draft framework lacked input on the transformation of TUT's libraries and how they relate to the discourse on 'africanization' and 'decolonization' of the university and the curriculum. The final draft of TUT Transformation Framework 2017 also contained little about TUT's libraries (TUT Transformation Framework, 2017).

The Library and Information Services directorate then initiated a separate transformation summit following the publication of the TUT Transformation Framework 2017. This summit, entitled, "New Trends and Technologies: The Future and Beyond", was held on the 28th of June 2018. The LIS transformation summit motivated library and information services researchers to re-imagine

TUT's libraries (MacCallum, 2017). The summit drew on a knowledge society approach but failed to analyse TUT's place and role in society's knowledge system.

Student disruptions at TUT, as well as debates that followed the fees-must-fall movement, surfaced university-library-community relations. These relations occur within a broader societal framework that involves society's knowledge system, and that warrants closer scholarly attention. A possible way forward is to therefore locate and analyse TUT's libraries within the knowledge system in society.

Theoretical framework

According to Dick (1982: 17), the knowledge system is a broader social context that can facilitate the sociological study of librarianship. Traditionally, TUT's libraries support the teaching, learning and, research activities of the university. However, they do not operate in a vacuum and they are part of the broader society. This is evident in TUT's the private-state-economy relationships. The main argument is that academic libraries have a historical relationship with research libraries, and have an important connection with society's knowledge system. A better understanding of this theoretical context of their support roles and functions should enable TUT's libraries to respond adequately to social conflict in the future.

Methods

The article employs a blended method approach that draws on a survey, a focus group, interviews, literature and empirical evidence to build a case study of TUT's libraries located within a wider knowledge system context. A purposive sample of 40 participants is drawn for this article. The

sample consists of members of TUT Executive Management Committee, the Library and Information Services Directorate, Heads of Libraries, librarians and representatives of student organisations. Purposive samples are selected on the basis of the knowledge the sample possesses on a phenomenon or phenomena (Babbie, 2011: 179). Data from participants at TUT is collected in a survey using an electronic questionnaire. The survey is followed by a focus group and interviews. The author uses an electronic survey questionnaire because TUT campuses are spread across four provinces. The electronic survey questionnaire relies on email addresses and it's able to reach all participants regardless of location. Also, the focus group and interviews are chosen to follow up on the electronic survey questionnaire. Participants can share experiences they were unable to share in the survey. Responses from the discussion were transcribed into a permanent record using Creswell's data analysis spiral approach. According to Creswell (2007) the spiral consists of categorization or coding, classification and synthesis before the final presentation. The author also relied on notes taken during moderation, sound bites from the recording as well as non-verbal communication, gestures and behavioural responses. Importantly, the analysis reflects the epistemological orientation of the author. A multiple constructionist reality approach was taken to accommodate the diversity of languages used during the focus group discussion at the TUT Mbombela Campus. Members of the focus group are native speakers of local languages and dialects such as *Siswati*, *Northern Sotho*, *Tsonga* and *Sepulana*. In addition, the author, also a former employee of the TUT library, relied on documentary evidence collected.

Academic libraries and knowledge systems

The idea of a knowledge system is useful to explain relationships between the processes of knowledge production, application and use as a wider context for TUT's libraries functions of

organisation, storage as well as dissemination of information and knowledge. This knowledge system can be traced back to the early relationship between academic and research libraries.

According to Kent and Lancour (1968: 105), “a special library/research library’s function is to serve the needs of personnel of the parent or sponsoring organization... it must in addition, give attention to the collection of materials in fields which border on or relate to those of primary interest to the organization it serves”. Tidmarsh, in Saunders (1968) asserts that seminar libraries in German universities influenced some librarians in European nations (e.g. Britain) to set up departmental libraries opposite large research collections. During this period, both Oxford and Cambridge University Libraries had already considered themselves as research libraries. Worth noting is that the use of the term ‘departmental’ is prominent in TUT’s description of its libraries.

Specialization in academic and research/special libraries began in the USA, swept across the world and was later adopted by other countries. In the USA, many universities started as private colleges at a time when tax laws favored donations by private individuals, foundations, and corporations (Drake, 2003). For instance, Thomas Jefferson gave his collection to the University of Virginia as charity, and this collection created the university’s first proper library. According to Jolley, in Saunders (1968: 2), there is a common library and cultural tradition between British and American university libraries as well as between Australian, Scottish and British university libraries, with a few exceptions. TUT’s library shares a common library and cultural tradition with British and American university libraries through their relationship with private organizations.

The knowledge society approach

Since the concepts of an information and knowledge society reached global attention at the World Summit on the Information Society (WSIS) in Geneva in 2003, there has been an increase in the volume of literature on the knowledge society approach. Researchers across disciplines as well as politicians and business executives have written about the information and knowledge society. Researchers and librarians in TUT's libraries are also familiar with these concepts.

The World Summit on the Information Society in 2003 in Geneva defined the information and knowledge society as “a society in which people interact with technology as a fundamental part of life and social organisation to exchange information on a global scale” (International Telecommunications Union, 2003: no page number). It is therefore not surprising that available research in the discipline of library and information science on the information and knowledge society mostly covers the use of Information and Communications Technologies (ICTs) to empower local communities, as well as previously marginalized groups. Studies by Holmner (2008, 2011), Jiyane *et al* (2013), Nassimbeni (1998), Hamid and Zaman (2008), and others attest to this.

In all the studies mentioned above, it not clear how the concept of the information society links to the wider context of knowledge systems, especially regarding the creation, transmission, application and use of specialized technical knowledge, which is the life-blood of economic development, public policy making and education. Researchers who focus on the information and knowledge society approach in library and information science neglect the wider context of a knowledge system, and therefore deal with the concepts at a basic level.

The concept of the knowledge society follows on the idea of an information society. Both the concepts of an information and a knowledge society are often used interchangeably and can be confusing. Key sources on the knowledge society approach include Machlup (1962); Drucker (1993); UNESCO Report of (2005); Mansell and Gaetan in UNESCO (2013); and Lane (1966). Any attempt to study the arrangement of a society at a certain point in time should take into consideration the wider context of the knowledge society in relation to knowledge systems. The next section identifies key knowledge system models evaluated to determine changes affecting TUT's library activities, higher education, and South Africa's knowledge system.

Evaluated models

Researchers across various disciplines have sought to characterize the evolution of knowledge systems of contemporary societies using models. A set of models were evaluated using self-developed criteria (see Molepo, 2018 for a fuller discussion of the models). The criteria emphasise universities and their libraries as important partners in building the knowledge system of a country. The main elements in the criteria include the addition of a library project to TUT's transformation agenda, to position academia as a leader in innovation, and acknowledging academic libraries as diverse cultural organizations within a broader societal context.

The evaluated models were categorized to produce: models for academic library activities (see Dongardive, 2013; Joint, 2011; Sigwald, 2016; Mehler and Waltinger, 2009; Baglier and Caswel, 2016); models of higher education (see Van Zijl et al., 2006; White, 2017; Hay and Van Gensen, 2008); as well as models depicting changes in society's knowledge system (see Gibbons *et al.*, 1992; Etzkowitz and Leydesdorff, 2000; Etzkowitz and Leydesdorff, 1995; 1997; Funtowicz and Ravetz, 1993; Lundvall, 2005; Schafer, 1983; Slaughter and Rhoades, 2004), and Dick's (1982)

model of society's knowledge system, which builds on the earlier work of Machlup (1962), Holzner and Marx (1979), and others. These models are discussed in detail in the Masters dissertation of Molepo (2018).

A model of society's knowledge system

The selected model has two distinctive features that make it different from others above. First, it proposes a reality constructionist approach that perceives knowledge as socially constructed by focusing on the social context within which knowledge is produced. Second, the model defines knowledge systems of contemporary societies as characterized by the processes of knowledge production, organization and storage, distribution, and use (Dick, 1982). This knowledge system model has implications for TUT's libraries since their functions can be understood in the sense that Dick (1982) characterizes the processes that make up the knowledge system of formalized, contemporary societies.

The knowledge system model that was preferred can be applied to TUT's libraries by calling attention to processes that are overlooked. For this reason, the functions of TUT's libraries were tested empirically and evidence shows that TUT's libraries focus on organization and storage, as well as distribution. These functions should however be supplemented by knowledge production and knowledge application since they are relevant in a knowledge system. The addition of knowledge production and application would allow TUT's libraries to respond more effectively to future social conflict. For example, TUT can partner with non-scientific local communities in scientific projects that will produce new knowledge in support of the knowledge production function of the knowledge system. This knowledge could add value to strategic transformation initiatives that speak to 'decolonization' and 'africanization' of TUT and its curriculum. This

partnership with local communities should also be used to inform TUT library's collection development policy.

TUT's executive management, the library and information services directorate, heads of libraries, librarians and representatives of student organizations were selected for data collection because they are knowledgeable about the overall management of the university and its libraries. A purposive sample of 40 participants is drawn for this paper. The sample consists of members of TUT Executive Management Committee, the Library and Information Services Directorate, Heads of Libraries, librarians and representatives of student organisations. For more details of the sample chosen, see Molepo (2018: 101). Underlying research material (i.e. data, samples) related to this article can be accessed through a folder stored on the Tshwane University of Technology cloud computing drive. This information is available upon request.

Results and Discussion

The results of data collected from distinct groups, interviews, literature review and documentary evidence were merged for analysis. The analysis of data for the survey began a month after an electronic questionnaire was distributed to members of TUT Executive Management Committee, the Library and Information Services Directorate, Heads of Libraries, librarians and representatives of student organisations via email. The survey was followed up with a focus group discussion and interviews. Both quantitative and qualitative data was collected and analysed. The electronic questionnaire had twelve questions and was compiled with Qualtrics Survey Software. Questions were standard in nature (i.e. multiple, open-ended, slider, rank order) as well as specialized (i.e. net promoter score).

Members of student organisations were invited to a focus discussion group made up of ten participants. This was a follow-up to the electronic questionnaire. Some members of student organizations were also interviewed. Responses from the discussion were transcribed into a permanent record using Creswell's (2007) data analysis spiral approach. There were also notes taken during moderation, sound bites from the recording, and non-verbal communication, gestures and behavioural responses were also noted.

Quantitative data

The following responses were collected from members of TUT Executive Management Committee, the Library and Information Services Directorate, Heads of Libraries, librarians and representatives of student organisations during the survey. Data was analyzed with the Statistical Package for the Social Sciences (SPSS). Due to a concern with the length and number of words in this article, the author present a selection of the results of data collected.

Experience of TUT's libraries response to social conflict

This question asked participants to rate their experience of TUT's libraries response to social conflict affecting South African Higher Education, specifically the #Feesmustfall and #Rhodesmustfall campaigns. The following responses were given:

a. Engagement with students

Of thirty five participants, the majority stated that the engagement of TUT's libraries with students' equalled expectations. More than 20% of participants stated that it was short of expectations and

far short of expectations (Refer to Figure 1). This question was followed up during interviews. Some interviewees indicated that engagement from TUT's libraries was through notices placed in and around the libraries.

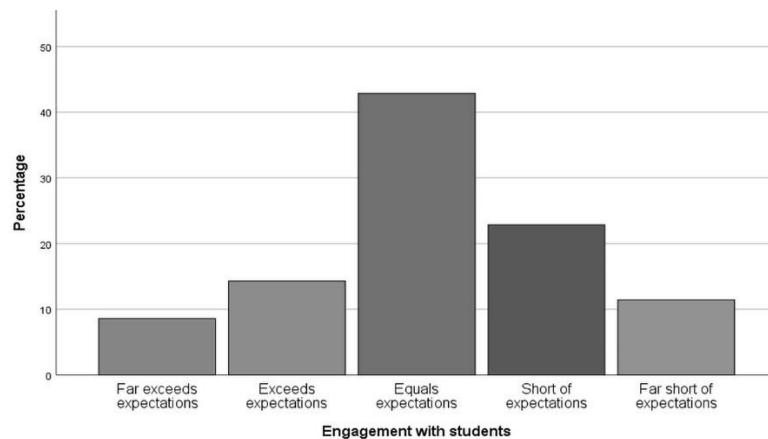


Figure 1: TUT's libraries engagement with students during social conflict

Most of the notices were communication related to the closure of libraries during student disruptions. Such notices were also used at the Mbombela Campus Library where the researcher works fulltime. According to the data, the response of TUT's libraries during the 2015 and 2016 student disruptions focused more on matters relating to service provision. There was less engagement with students in debates and discussions around transformation in higher education.

Engagement with the general public

When asked about TUT's libraries' engagement with the general public, more than 30% of the participants said it equalled expectations. More than 20% indicated that engagement with the general public was short of expectations. It is not clear what type of communication was used to engage the public during the 2015 and 2016 student disruptions. According to the documentary evidence at the researcher's disposal, there were no documented engagements with the general

public on transformation in higher education (Refer to Figure 2). Annual reports of TUT's libraries are not easily accessible to the public.

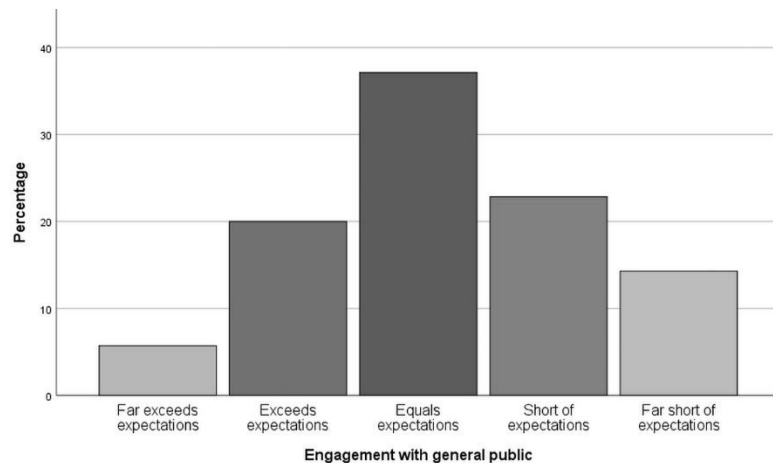


Figure 2: TUT's libraries engagement with general public

TUT's libraries current relationship with local communities

More than 50% of the participants indicated that TUT's libraries current engagement with the general public was average while more than 20% described the relationship as poor (see Figure 3). More than 50% of participants rated TUT libraries' web and social media to be much stronger despite the fact that TUT's libraries do not use any social media and their website is not updated regularly. If used correctly, websites and social media platforms can improve the relationship between organisations and clients. At the time of data collection, TUT's libraries could not be found on any social media platforms. In the case of TUT, regular updates of the library website and the use of social media will improve the relationship with local communities and expand the context for knowledge production and exchange.

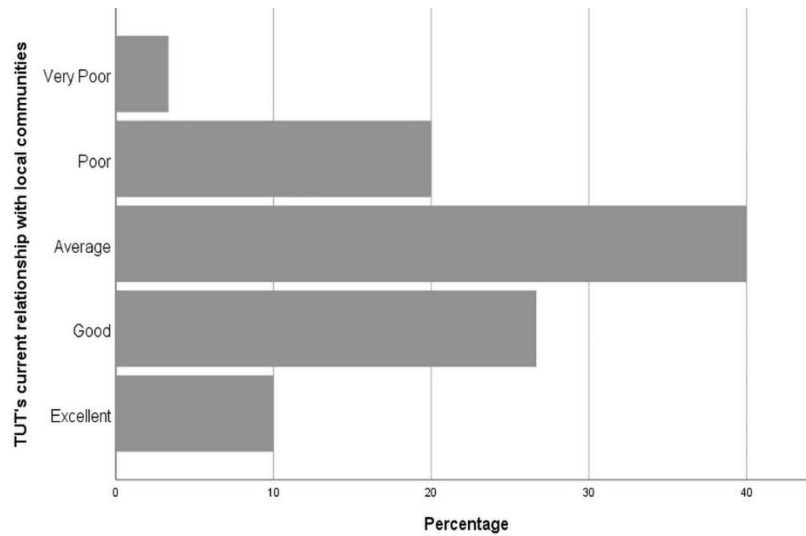


Figure 3: TUT's libraries current relationship with local communities

The results in Figure 2 indicate TUT's libraries could do much better to improve on the relationship with the general public. TUT's application of knowledge in the community (i.e. through community projects), supports the knowledge application function of the knowledge system. The current relationship that TUT's libraries has with the general public is not appropriate for an adequate response to social conflict.

Role that TUT's libraries may play to address social conflict

When asked about the role that TUT's libraries may play to address social conflict, the majority of participants indicated they may play a supporting role to the university. There was also a considerable number of participants who did not see the role of TUT's libraries in addressing social conflict. A few participants indicated that TUT's libraries should play a leading role. This data confirms the current situation of TUT's libraries. Most of the libraries serve as departmental libraries for specific academic programs. As a result, there was a general perception that TUT's libraries should continue to play a supporting role to academic departments. This means that there is resistance to the involvement of matters other than supporting academic departments.

Qualitative data

TUT's Transformation Framework

Most participants think that the libraries role is not clearly stated in the TUT Transformation Framework (2017). In addition, participants indicated that it was the first time they heard about the framework. Furthermore, the university's libraries initiated a separate transformation framework with a different strategy and different priorities.

Why academic libraries are targeted during student protests

It was indicated that the approach of student social movements is too politicized, and not clearly thought through (Poho, 2016). Most importantly, Dahrendorf (1958) illuminates the importance of categorizing and classifying occurrences in order to avoid reducing social conflict to class struggles only. TUT's libraries services and learning activities were disrupted during the 2015 and 2016 student disruptions because of the close relationship they have with the university. More than 50% in the survey and focus discussion group indicated that the reason why libraries are targeted during protests is because they are places of knowledge, critical resource centers and a most essential place, just to mention a few (Refer to Figure 7). This means that the actual role and responsibility of academic libraries in society is far greater than currently-perceived functions. The knowledge they preserve and disseminate has implications for the political, cultural, and social well-being of society.

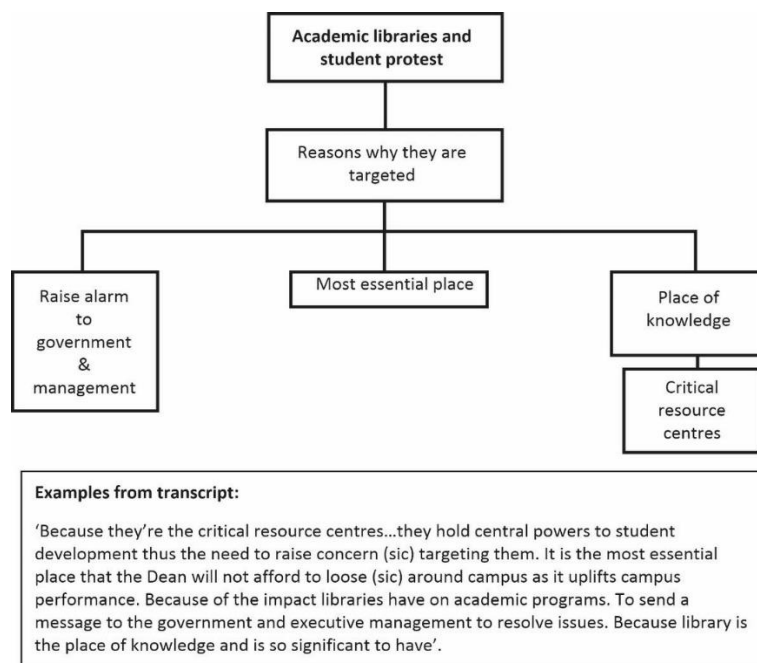


Figure 4: Why academic libraries are targeted during student protests

Although TUT's libraries were not directly targeted during student protests, reference to academic libraries as places of knowledge confirms the need to locate TUT's libraries within a wider societal context and knowledge system. TUT library's research function and profile could be improved by having the Chief Information Officer as Chair of the Library Committee working together with the Director of Library and Information Services.

Discussion

It was found that academic libraries did not feature prominently in debates and discussions during the 2015 and 2016 student disruptions. Debates and discussions on transformation in the South African higher education sector appear to be reduced to political and class struggles by some student leaders. This article shows that the idea of a knowledge system is valuable for the sociological study of librarianship. The small amount of library history in South Africa makes it difficult to understand the complex nature of academic libraries. The historical relationship

between academic and research libraries requires that TUT's libraries can be more fully explained and understood in terms of related functions (i.e. knowledge production, application and use) relevant in a knowledge system.

The student disruptions of 2015 and 2016 presented a crisis for TUT's libraries. It was found that TUT's libraries response to the 2015 and 2016 student disruptions is problematic and short-sighted. The quantitative and qualitative data collected confirm the general perception of TUT's libraries as supporting entities rather than active participants in society's knowledge system. Hence, their exclusion in transformation initiatives of the university. The data also confirm that there is resistance from TUT's libraries to get involved in other matters beyond their support role. TUT's libraries passive response stems from a poor understanding of the theoretical foundations of academic libraries and of society's knowledge system by librarians, university management and students. Of greater concern is that library and information science researchers in South Africa have not yet sufficiently investigated academic libraries using the knowledge system context.

There is an ongoing initiative aimed at re-imagining TUT's libraries given the changes taking place in higher education (Mccallum, 2017). This initiative was preceded by the LIS Transformation Summit held on the 28th of June 2018 at TUT Main Campus in Pretoria. Social media and digitization dominated the summit. This technology-centred approach of initiatives in TUT's libraries should be linked to the wider context of society's knowledge system.

Recommendations for TUT libraries

The following are recommended for a new policy direction for TUT's libraries:

- Epistemology should be the basis to chart the future knowledge system role of TUT's libraries. It should be used to question the assumptions which inform the knowledge contained in their collections, the classification system used to organise the collections, research methodologies used to find solutions to challenges etcetera. The use of epistemology has implications for the policy direction of TUT's libraries.
- The collection development policy of TUT's libraries needs to be aligned with TUTs Policy on Language of Teaching, Instruction and Communication as well the policy on research and development. The purpose should be to proactively include the indigenous languages identified in TUT's Policy on Language of Teaching, Instruction and Communication into the collections of TUT's libraries. Alignment with research and development affirms a knowledge production and application function of the knowledge system. In addition, more indigenous languages should be included in the collections of TUT's libraries based on the criteria of geographical location of TUT's libraries.
- In order to support the adaptation of the collection development policy, the policy on the acquisition of information resources needs to clearly specify the suppliers of information resources for TUT's libraries. In addition to supporting academic departments, the criteria for acquiring information resources should prioritise publishers of indigenous languages and content.
- The policy on Information Literacy Training should be aligned with TUTs Policy on Language of Teaching, Instruction and Communication. The curriculum and content of the Information Literacy Content needs to be inclusive of local languages and content.
- Future library and information services summits on transformation should put more emphasis on the direct relationship between TUT's libraries and functions relevant in a knowledge

system. The knowledge system context should be used as a guide to investigate TUT's libraries.

Recommendations for government and institutions of higher learning

In South Africa, the national innovation system model has been used to guide national innovation and technology transfer policies since 1994. Therefore:

- It is recommended that government acknowledges the relevance and significance of information science in the domains of economic development and policy formulation,
- Epistemic communities made up of policy analysts, information scientists, and language practitioner's etcetera, should be part of supranational institutions and blocs such as Brazil Russia India China South Africa (BRICS). They should also attend local and international conferences where debates on changes in knowledge systems of contemporary societies take place. Their reports should be used to formulate national policies,
- It is recommended that library and intellectual history be included in library and information science curricula.
- The government should implement the recommendations of the Committee of Higher Education Libraries of South Africa regarding university library funding, as highlighted in the report by the Heher Commission of Inquiry into Education and Training.

Conclusion

The 2015 and 2016 student disruptions presented a crisis for TUT's libraries. Contrary to the perspective of some student leaders, this article shows that the targeting of libraries during student protests is not a political or class conflict. It represents a unique type of social conflict which has

been investigated using the idea of a society's knowledge system in this article. This enriches scholarly analysis of the academic library.

Conflict of interest and Funding

There is no conflict of interest in this article. This work was supported by the Tshwane University of Technology [grant number 168409].

References

- Babbie E (2011) *Introduction to Social Research*. 5th Edition. Belmont: Wadsworth Cengage Learning.
- Baglier T and Caswell T (2016) Destroy Your Classroom: Reconceptualising the Instructor/Student Model in Academic Libraries. *Journal of Library Administration*, 56 (1): 17-26.
- Buchanan N (2008) *A history of the University of Natal Libraries*. 1910-2003. DPhil thesis. Durban: University of Kwazulu-Natal.
- Council on Higher Education (2017) *Tshwane University of Technology Institutional Feedback Report*. Available at <http://www.che.ac.za/sites/default/files/FINAL%20QEP%20report%20TUT.pdf> (accessed 02 November 2018).
- Coates PR (2014) *The South African Library as a State-aided national library in the era of apartheid: an administrative history*. DPhil thesis. Cape Town: University of Cape Town.

- Creswell J (2007) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks: Sage.
- Dahrendorf R (1958) Toward a theory of social conflict. *The Journal of Conflict Resolution*, 2(2): 170-183.
- Dick AL (1982) Society's knowledge system and its implications for librarianship. *South African Journal for Librarianship and Information Science*, 50 (1): 17-21.
- Dick AL (2006) Book History, Library History and South Africa's Reading Culture. *South African Historical Journal*, 55 (1): 33-45.
- Dick AL (2013) Reacting to Timbuktu. *Information Development*, 29(2): 104-105.
- Drake M (2003) *Encyclopaedia of Library and Information Science*. 2nd ed. New York: Marcel Dekker Incorporated.
- Drucker PF (1993) The rise of the knowledge society. *The Wilson Quarterly* 17(2): 52-71.
- Dongardive P (2013) Online journals: Access and delivery models. In: Thanuskodi S (ed) *Challenges of academic library management in developing countries*. Hershey: Information Science Reference, pp. 83-93
- Dubow S (2006) *A commonwealth of knowledge: science, sensibility, and white South Africa*. Sussex: Oxford University Press.
- Gibbons M et al (1994) *The New Production of Knowledge: the Dynamics of Science and Research in Contemporary Societies*. Stockholm: Sage Publications.
- Etzkowitz H and Leydesdorff L (1997) *Universities and the Global Knowledge Economy: A Triple Helix of University-Industry-Government Relations*. London: Cassel Academic.

Etzkowitz H and Leydesdorff L (2000) The dynamics of innovation: from National Systems and Mode 2 to a Triple Helix of university-industry-government relations. *Research Policy*, 29: 109-123.

Etzkowitz H and Leydesdorff L (1995) The triple helix-university-industry-government relations: a laboratory for knowledge-based economic development. *EASST Review*, 14 (1): 14-19.

Funtowicz SO and Ravetz JR (1993) *Science in the Post Normal Age*. Futures: Butterworth-Heinemann Ltd.

Hamid NA and Zaman HB (2008) Preliminary study on knowledge society criteria and indicators: a cognitive informatics approach. In: *IEEE Conference Proceedings International Symposium on Information Technology*, Kuala Lumpur, Malaysia, 26-28 Aug 2008, pp.1-7. Kuala Lumpur: IEEE.

Holzner B and Marx JH (1979) *Knowledge application: the knowledge system in society*. Boston: Allyn and Bacon Inc.

Holmner MA (2011) The road to the information society and knowledge society: indigenous knowledge and millennium development goals. *Mousaion*, 29(2): 139-157.

Holmner MA (2008) *A critical analysis of information and knowledge societies with specific reference to the interaction between local and global knowledge systems*. PhD Thesis, University of Pretoria, SA.

International Telecommunications Union (2003) *World Summit on the Information Society*. Available at: <<https://www.itu.int/net/wsis/>> (accessed 20 August 2017).

Immelmann RFM (1955) *The Library of the University of Cape Town: Historical Development, 1829-1955*. University of Cape Town.

- Jiyane GV et al (2013) South Africa as an information and knowledge society: the benefit to informal sector women entrepreneurs. *South African Journal of Library and Information Science*, 79(1): 1-12.
- Joint N (2011) New perspectives on the convergence of academic libraries and campus information technology departments. *Library Review*, 60 (8): 637-644.
- Kent A and Lancour H (1968) *Encyclopaedia OF Library and Information Science Volume One*. New York: Marcel Dekker Incorporated.
- Lane RE (1966) The decline of politics and ideology in a knowledgeable society. *American Sociological Review*, 31 (5): 649-662.
- Le Grange L (2016) Decolonizing the university curriculum. *South African Journal of Higher Education*, 30(2): 1-12.
- Lor PJ (2013) Burning libraries for the people: Questions and Challenges for the Library Profession in South Africa. *Libri*, 63 (4): 359-372.
- Lundvall BA (2005) National Innovation Systems - Analytical Concept Tool. In: *Industry and Innovation DRUID Tenth Anniversary Summer Conference*, Copenhagen, Denmark, 27-29 June 2005, pp. 2-41. Copenhagen: Aalborg University.
- Machlup F (1962) *The production and distribution of knowledge in the United States*. Princeton: Princeton University Press.
- Mansell R and Tremblay G (2013) *Renewing the knowledge societies vision for peace and sustainable development*. Available at:
<<http://unesdoc.unesco.org/images/0022/002245/224531E.pdf>> (accessed 10 September 2017).

- McCallum A (2017) 'Reimagining TUT campus libraries – a project unfolding. In: *18th LIASA Annual Conference*. Gauteng: Library and Information Association of South. Available at <
<http://www.liasa.org.za/18th-liasa-annual-conference-abstracts-reimagining-tut-campus-libraries-a-project-unfolding/>> (accessed 02 November 2018).
- Mehler A and Waltinger U (2009) Enhancing document modeling by means of open topic models: crossing the frontier of classification schemes in digital libraries by example of the DDC. *Library High Tech*, 27(4): 520-539.
- Musiker R (1982) *Aspects of Wits Library History*. Johannesburg: Witwatersrand University Press.
- Molepo MJ (2018) *The Academic Library in Society's Knowledge System: A Case Study of Tshwane University of Technology*. MIS Dissertation, University of Pretoria, SA.
- Nassimbeni M (1998) The information society in South Africa: from global origin to local vision. *South African Journal of Library and Information Science*, 66(4): 154–161.
- Ntsala M and Mahlatji M (2016) Service delivery protests resulting in the burning of libraries: a study of selected public libraries in South Africa. In: *SAAPAM Limpopo Chapter 5 Annual Conference Proceedings*, Turfloop, South Africa, 24 January 2017, pp. 219-227. Turfloop: University of Limpopo.
- Nzimande B (2015) *Speech by Minister Blade Nzimande at the Higher Education Summit held at the Nkosi Albert Luthuli ICC in Durban*. Available at: <<http://www.gov.za/speeches/speech-minister-be-nzimande-higher-education-summit-held-inkosi-albert-luthuli-icc-durban>> (accessed 11 April 2018).
- Pieterse DJ (2007) *Tshwane University of Technology Transformation Discussion Document*. Pretoria: Strategic Management Support.

Poho K (2016) Free quality decolonized education. Wits Vuvuzela. Available at: <<http://witsvuvuzela.com/2016/10/01/free-quality-decolonised-education/>> (accessed 26 March 2017).

Slaughter S and Rhoades G (2004) *Academic Capitalism and the new economy: markets, state and higher education*. Baltimore: The John Hopkins University Press.

Saunders WL (1968) *University and Research Library Studies: Some contributions from the University of Sheffield Postgraduate School of Librarianship and Information Science*. Oxford: Pergamon Press.

Schafer W (1983) *Finalization in Science: the social orientation of scientific progress*. Dordrecht: D. Reidel Publishing Company.

Sigwald R (2016) Self-service customer service models in libraries. *Journal of Library Administration*, 56 (4): 453-478.

South African History Online (2018) *Student Protests at Tshwane University of Technology – Timeline*. Available at < <https://www.sahistory.org.za/article/student-protests-tshwane-university-technology-timeline>> (accessed 02 November 2018).

Suttie ML (2006) The University of South Africa Library: From the Soweto Rebellion to the Beginning of the End of Apartheid, 1976-1990. *Mousaion*, 24 (2): 282-312.

Suttie ML (2005) The Formative Years of the University of South Africa Library, 1946-1976. *Mousaion*, 23 (1): 97-118.

Tshwane University of Technology (2004-2018) *About us*. Available at: <<http://www.tut.ac.za/About%20Us/>> (accessed 12 April 2017).

Tshwane University of Technology (2017) *Transformation Framework*. Available at:
<<https://www.tut.ac.za/Documents/2018/Transformation-Framework.pdf>> (accessed 03 June 2018).

Tyrell-Glynn WHPA (1972) *An account of some libraries and book collections at the Cape of Good Hope, with special reference to the establishment of the South African Library*.
Unpublished DLitt dissertation. Stellenbosch: Stellenbosch University.

United Nations Educational Scientific Cultural Organization (2005) *Towards knowledge societies*. Available at: <<http://www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/towards-knowledge-societies-unesco-world-report/>> (accessed 03 May 2017).

Van Zijl CW, Gericke EM and Machet MP (2006) Developing library collections at universities of technology: comparing practices in New Zealand and South Africa. *South African Journal for Library and Information Science*, 72(3): 159-171.

White B (2017) Are micro campuses a new model for international HE? University World News: The Global Window on Higher Education. Available at:
<<http://www.universityworldnews.com/article.php?story=20170522232833803>> (accessed 01 October 2017).